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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,635	09/22/2005	Gunter Barrenberg	BM-177PCT	1966

40570 7590 09/26/2007  
FRIEDRICH KUEFFNER  
317 MADISON AVENUE, SUITE 910  
NEW YORK, NY 10017

EXAMINER
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MERLINO, ALYSON MARIE

ART UNIT	PAPER NUMBER
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3676

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09/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/550,635	BARREBERG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alyson M. Merlino	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 22 September 2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. The examiner would like to note that the foreign application DE 103 13 125.6 to which applicant claims priority does not enable the claims within the application, therefore, the application does not receive the benefit of the foreign application's date of 24 March 2003. Furthermore, the references used in accordance with the rejection set forth below have issue dates that fulfill the requirements of 35 U.S.C. 102(b) in view of applicant's PCT priority date and the foreign application's date.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: the drawings are replete with reference characters that are not discussed in the specification. It is suggested that the specification be thoroughly reviewed. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. It is unclear from the specification whether Figures 1.1a-2.2b should be designated by a legend such as --Prior Art—since the tumblers shown in the figures are not associated with an insert in Figures 1.1a-2.2b or any subsequent figure. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

#### **Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

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- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is

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necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

4. The disclosure is objected to because of the following informalities:
- a. In accordance with the 35 U.S.C. 112, first and second paragraphs rejection set forth below, the specification is replete with errors regarding the figures and should be thoroughly reviewed. The informalities listed below are only examples of errors within the specification.
  - b. On pages 1 and 7, references to the claims are improper in the specification.
  - c. On page 9, line 13, the phrase "Figures 1.1a-2.3a" should be "Figures 1.1a-2.2a" since there is not "Figure 2.3a" included in the drawings.
  - d. On page 9, line 22, the phrase "Figure 3" should be "Figures 3.1a and 3.2a" for clarification.

Appropriate correction is required.

#### ***Claim Objections***

5. **Claims 1-29 are objected** to because of the following informalities:
- a. In regards to all the claims, the references characters should be removed for clarification.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 1-29 are rejected** under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the specification is replete with reference character errors and references to figures not originally disclosed, such as Figures 2.3a, making the discussion of the device and its multiple embodiments shown within the figures confusing. It is suggested that the specification be thoroughly reviewed in view of the figures. For examination purposes, the claims will be given a broad interpretation until corrections to the specification are made.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1-29 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, in regards to all the claims, the confusion regarding reference characters, references to missing drawings, and the overall description of the device within the specification renders the claims indefinite.

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For examination purposes, the claims will be given a broad interpretation until further clarification from applicant.

10. In accordance with the objection to the claims regarding the reference characters, the claims contain inconsistent terminology, such as the "plate-shaped tumblers" in line 8 of claim 1 and the "spring-loaded tumblers" in line 25 of claim 1, and should be reviewed for any other occurrences.

11. **In regards to claim 1**, it is unclear from the phrase "a loss-prevention function is provided" what applicant is intending to claim. For examination purposes, the claim will be given a broad interpretation until further clarification from applicant.

12. **Claim 7** recites the limitation "the normal teeth" in line 9 of the claim. There is insufficient antecedent basis for this limitation in the claim.

13. **In regards to claims 7, 18, and 22**, it is unclear whether the limitations following the word "although" are included in the recitation within the claims, therefore, the claims will be given a broad interpretation.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein



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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. **Claims 1-29 (as best understood) are rejected** under 35 U.S.C. 103(a) as being unpatentable over Cook (US-5826451) in view of Prunbauer (US-6427506).

17. **In regards to claim 1**, Cook discloses a lock cylinder (Figure 4) including a cylinder housing 42 and a cylinder core 12 rotatably support in the housing (Figure 4), and a key 44 with a defined longitudinal profile being assigned to the core (Col. 9, lines 45-54). Cook further discloses a group of diametric shafts 30 arranged in a row in the axial direction of the cylinder core (Figure 1), which hold plate-shaped tumblers 14 that include longitudinal edges that are free to slide longitudinally along guide surfaces 28b (apparent from Figure 4) of the shafts. Cook discloses that each tumbler has a control edge (edge of portion 14a, Figure 4) in correspondence with the longitudinal key (Figure 4), and each control edge being located at a defined height (apparent from Figure 5). Cook further discloses a radial opening (opening near reference character 23, Figure 1) in the cylinder core for insertion of an insert 16, with an outer end of the insert being within an external contour of the cylinder core after its insertion (apparent from Figure 1), whereas an inner end (end near reference character 16a, Figures 2 and 3) engages a cutout (portion near reference character 14b, Figure 1) in the facing edge of the longitudinal plate edge of the tumblers (Figures 4 and 5). Cook also discloses that the

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tumblers are secured in the cylinder core (apparent from Figures 4 and 5), and that the insert includes a comb-like body (apparent from Figures 2 and 3) with teeth (portions near reference characters 16a, 16b, and 16c, Figures 2 and 3) that have inner ends that include a profile with at least one pair of oppositely-facing flanks (edges of portions 16a, Figure 4). Cook discloses that the cutouts in the tumblers have at least one pair of opposing flanks (portions engaging flanks of insert, Figure 4), which are in different positions on the tumblers (apparent from Figures 2 and 3), and the flank pairs and the opposing flank pairs are arranged so that the control edges of at least two tumblers are at the same height (as shown in Figure 3). Cook further discloses that between a rest position and an actuated position that one of the flanks rests against an opposing flank (apparent from movement shown in Figure 5).

18. Cook fails to disclose that the tumblers are spring-loaded. Prunbauer teaches tumblers 9 that are spring-loaded (Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include springs within the cylinder lock disclosed by Cook to spring-load the tumblers since it is well known in the cylinder lock art that tumblers can be spring-loaded in order to ensure that the tumblers are placed in their original rest positions after a key is withdrawn from the cylinder core.

19. **In regards to claims 2, 3, and 4**, Cook discloses a plurality of similar cylinder cores (Figures 4-6) can be used with a set of different combs (combs shown in Figures 5 and 7-13) that are provided with different profiles. Cook further discloses that the teeth of the combs have similar profiles and are arranged in different sequences on the comb (Figures 4-13) where the comb is used with a cylinder core of uniform type

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(apparent from Figures 4-13). Cook also discloses that the profiles of the teeth on the comb are of similar design (Figures 2 and 3).

20. **In regards to claim 5**, Cook discloses that the opposing flanks of the cutouts are offset from each other in the height direction (Figures 4 and 5).

21. **In regards to claim 6**, Cook discloses that the inner ends of the teeth of the comb are convexly profiled (apparent from Figures 4 and 5) in the radial direction with at least two pairs of flanks (Figures 2-4), which are at different heights (Figures 2 and 3), and that the cutouts in the tumblers are concavely profiled (apparent from Figures 4 and 5) in the radial direction and have sections which form at least two pairs of opposing flanks (Figures 2-4).

22. **In regards to claim 7**, Cook discloses that the teeth are positioned in similar openings of the cylinder core in two orientations (placement as shown in Figures 1-3).

23. **In regards to claim 9**, Cook discloses that the maximum point of the tooth profile (near reference character 14b, Figure 4) is positioned in the cylinder core so that it "essentially" lies on a traverse plane (plane extending from side of core with insert towards side with reference character 12, Figure 4) of the cylinder core.

24. **In regards to claim 10**, Cook discloses that a tooth of the comb has two pairs of flanks, an inner pair (flanks on either side closest to reference character 48, Figure 4) which are closer to the transverse plane (Figure 4) and an outer pair (flanks opposite the inner pair, Figure 4) which is further away from the transverse place (Figure 4).

25. **In regards to claims 8 and 11-29**, Cook discloses that the insert can include many different shaped teeth (as shown in Figures 4-13) to engage correspondingly

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shaped cutouts in the tumblers (as shown in Figures 4-13). Since Cook discloses that the insert can be designed to have teeth of varying shapes to engage corresponding cutouts on tumblers of a cylinder core, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the shape of the teeth of the insert and the cutouts of the tumblers in order to allow more variations of the tumbler and insert combination to enhance the security and versatility of the cylinder lock. Furthermore, there is not indication in the claims that the shape of applicant's insert and the corresponding cutouts is critical to the function of the cylinder lock, only that the shape of the teeth of the insert and the cutouts correspond so that they may engage each other. Therefore, since Cook discloses that the insert and cutouts can vary in shape, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the corresponding shapes of the insert, as disclosed by Cook, since a change in the shape of a prior art device is a design consideration within the skill of the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alyson M. Merlino whose telephone number is (571) 272-2219. The examiner can normally be reached on Monday through Friday, 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on (571) 272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AM *AM*  
September 20, 2007

  
JENNIFER H. GAY  
SUPERVISORY PATENT EXAMINER